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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service

COMMERCIAL HATCHERY PRODUCTION
1938-1940

By Geographic Divisions

Washington, D. C.
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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WASHINGTON, D. C.

CHICKS PRODUCED BY COMMERCIAL HATCHERIES
1938 - 1940

From an output that could be measured in thousands at the beginning of the twentieth century, the commercial hatchery industry has grown until it now supplies over 70 percent of the total number of chicks raised on farms each year, and almost 100 percent of those raised in commercial flocks. Even as recently as 1930, only 42 percent of the chicks raised on farms came from commercial hatcheries, but by 1934 this proportion had increased to 47 percent, by 1938 to 58 percent, and by 1940 to 73 percent.

Replacement of farm, or home hatched, chicks by commercial hatcheries has brought striking changes to the egg and poultry industries. No longer is the chick production season limited by the instincts of nature and the vagaries of "broody" hens. Through the lengthening of the egg laying season by breeding and improved management practices, the commercial hatchery has made it possible for egg and poultry producers to secure chicks in quantity throughout the year. As a result, the seasonal pattern of egg and poultry production in recent years has been drastically modified. Millions of pounds of fresh broilers and millions of dozens of fresh eggs are now coming to market during the fall and winter months, when ten years ago, storage stocks constituted the principal sources of supply. Because of these changes and the important part that the hatchery industry has had in bringing them about, the need for information on production of hatchery chicks as an advance indication of trends in egg and poultry production has, in late years, received general recognition.

Hatchery Report Started in 1929

The first attempt to gather information on commercial hatchings was in 1929, when the United States Department of Agriculture started a Monthly Hatchery Report. The 1929 reports were issued for only three months -- March, April, and May -- and was restricted to data on eggs set and chicks hatched. In succeeding years, the inquiry to commercial hatcheries was expanded to include information on advance bookings, distribution, production of turkey poults, and sexing of chicks, and the period for which reports were issued was extended to cover all months from January through July. Beginning with October 1932, a special report was released on hatchings during October, November, and December in those States in which the fall production of broilers was of primary importance; and finally, in 1940, the complete report was issued for each month of the year.

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ESTIMATED NUMBER OF CHICKS HATCHED MONTHLY BY COMMERCIAL HATCHERIES, 1938-40

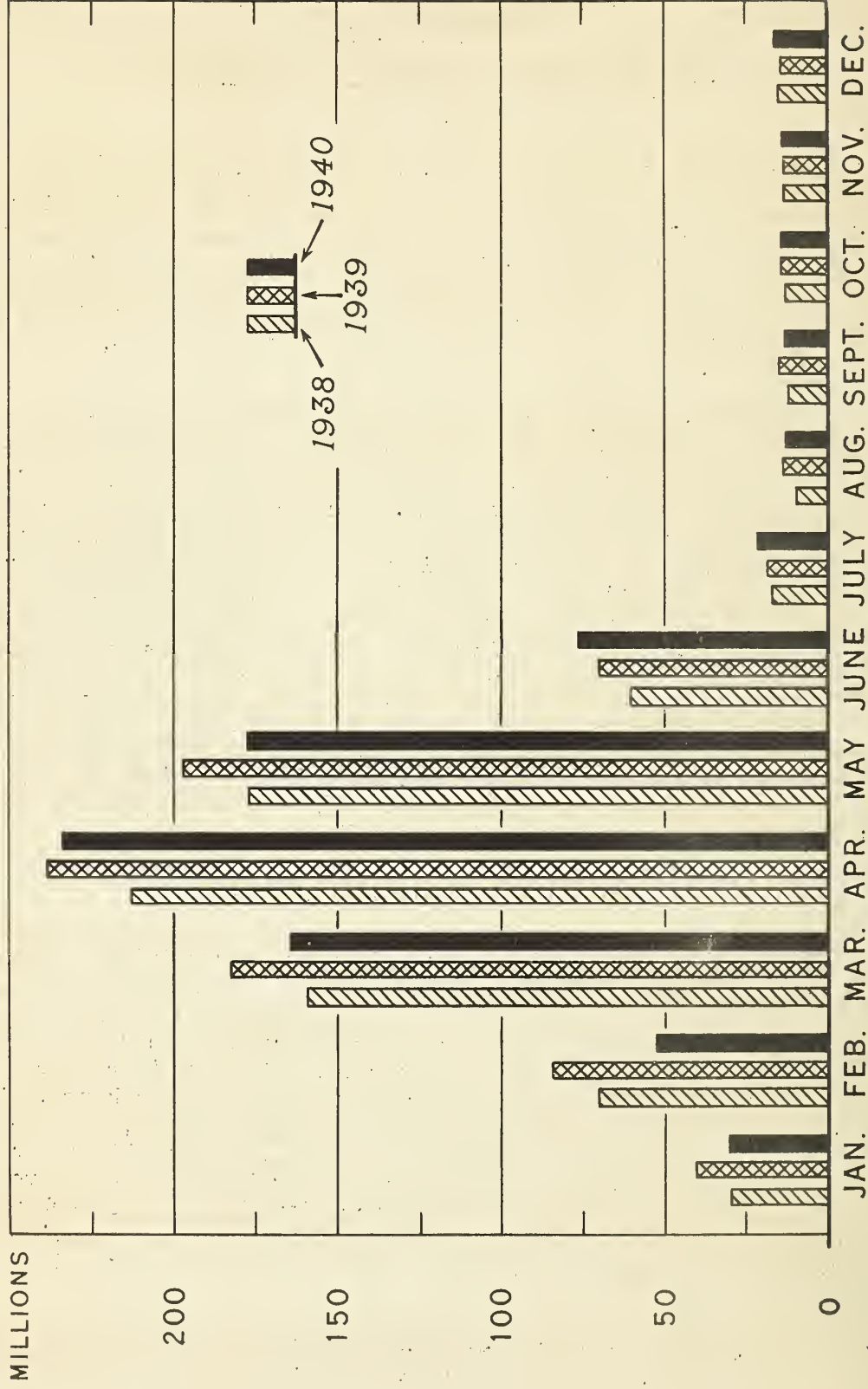


TABLE 1. ESTIMATED NUMBER OF CHICKS HATCHED EACH MONTH BY HATCHERIES

Year : Jan. : Feb. : Mar. : April : May : June : July : Aug. : Sept. : Oct. : Nov. : Dec. : Total													
	-- Thousands --												
1938	29,665	70,173	159,241	212,897	171,076	60,128	17,072	9,867	11,466	12,477	13,608	14,617	781,687
1939	40,282	84,457	182,437	238,944	197,426	70,094	18,497	13,317	14,184	13,765	13,042	13,858	900,303
1940	30,014	52,861	164,100	233,526	177,237	77,036	21,418	12,472	12,898	13,355	13,206	15,799	823,922

TABLE 2. PERCENT OF ESTIMATED NUMBER OF CHICKS HATCHED EACH MONTH BY HATCHERIES

Year : Jan. : Feb. : Mar. : April : May : June : July : Aug. : Sept. : Oct. : Nov. : Dec. : Total													
1938	3.8	9.0	20.4	27.2	21.8	7.7	2.2	1.2	1.5	1.6	1.7	1.9	100
1939	4.5	9.4	20.3	26.5	21.9	7.8	2.1	1.5	1.6	1.5	1.4	1.5	100
1940	3.7	6.4	19.9	28.4	21.5	9.3	2.6	1.5	1.6	1.6	1.6	1.9	100

A next significant step in the gathering of statistical data on the hatchery industry came in 1934 when the Agricultural Adjustment Administration, under the authority of the national hatchery code, made an enumeration of commercial hatcheries. A total of 11,405 commercial hatcheries, with a capacity of 276,287,000 eggs, was found. Reports of operations during 1934 indicated the production of 453,428,000 chicks. A similar enumeration made by the same agency for the year ending August 1, 1938, found 10,533 plants with a total output of 781,745,000 chicks. These two surveys supply a background of basic information which, combined with data gathered in the Department's monthly hatchery reports, enable long-time trends in the hatchery industry to be studied and measured.

Since the first monthly issue of the hatchery report in 1929, the data on the changes in the number of eggs set, salable chicks hatched, and number of chicks on advance order have been given in terms of percentage changes between the current month and the same month in the preceding year. Such figures serve a definitely useful purpose, but, unfortunately, their efficacy is limited in that comparison cannot be made for more than two specific periods without a great deal of exacting and detailed computations. Furthermore, a percentage comparison alone between two definite periods offers no measure of the importance of that comparison in terms of the absolute number of eggs or chicks relative to changes reported for other months or periods. The comparability of current monthly data not only with those of the same month in the preceding year, but with the same month, or averages of the same month, in other years, greatly increases their value. The logical way to develop more elastic comparability is to estimate the total number of eggs set and chicks hatched on the basis of reports received from a representative sample of hatcheries.

The difficulty of estimating the number of eggs set and the number of salable chicks hatched by commercial hatcheries has heretofore been the lack of basic information on the total number of eggs set and the total number of chicks hatched for any specific period. This difficulty has been largely overcome by the two enumerations made by the Agricultural Adjustment Administration in 1934 and in 1937-38, and a supplementary survey made by the Agricultural Marketing Service to determine the monthly distribution of the total number of chicks hatched in 1938, 1939, and 1940.

Total commercial hatchings during the calendar year of 1938 are estimated to have totaled 781,667,000 chicks; in 1939, 900,303,000 chicks; and in 1940, 823,922,000 chicks. The number estimated to have been hatched by months in each of those three years, and the monthly percentage distribution of each year's production, appear in tables 1 and 2.

The commercial hatchery season normally runs from August through July of the following year, with a seasonal low point reached in August. In the three years of 1938, 1939, and 1940, the August hatchings averaged

PERCENTAGE OF ESTIMATED ANNUAL PRODUCTION OF HATCHERY CHICKS PRODUCED MONTHLY, 1938-40

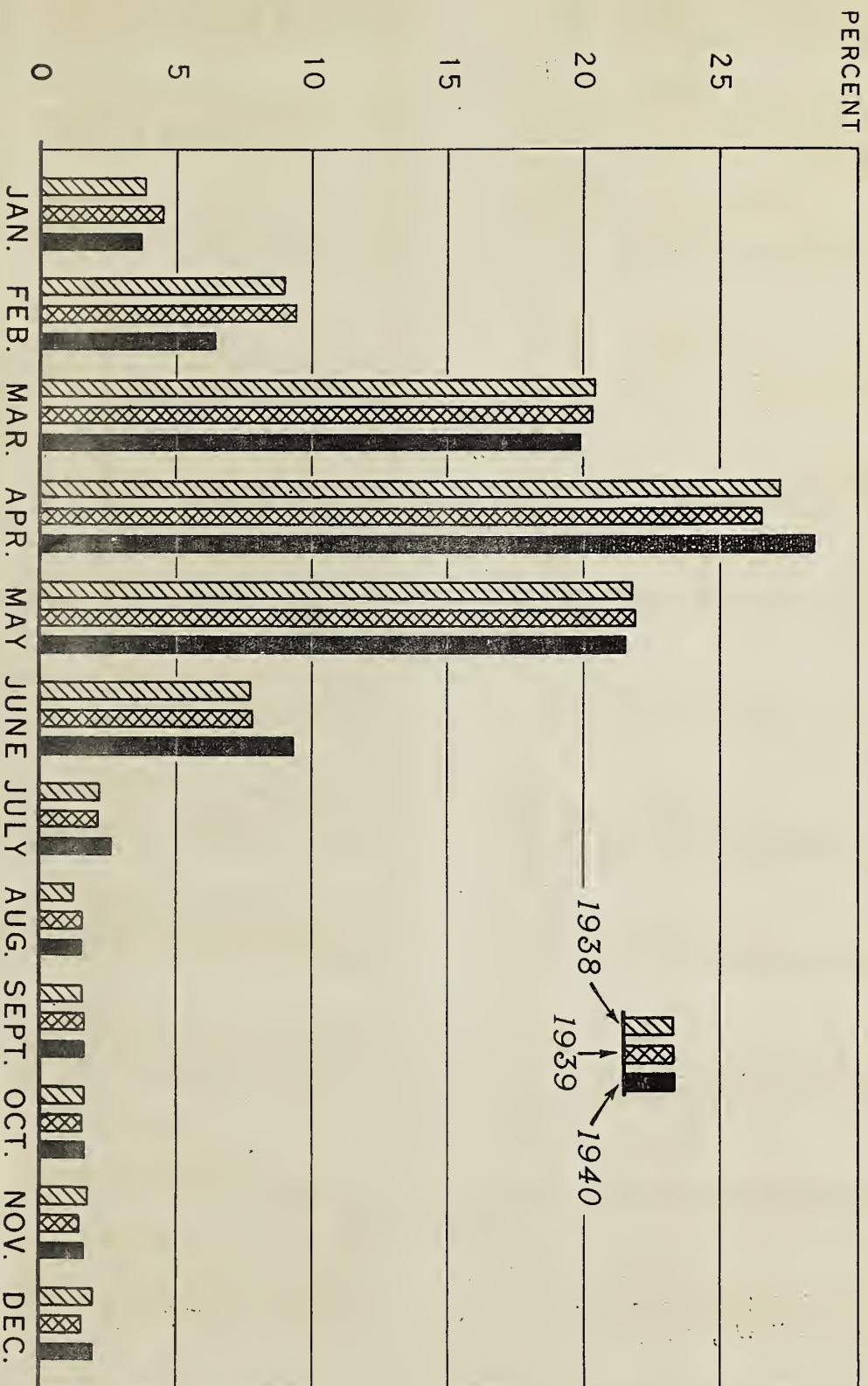


TABLE 3. MONTHLY ESTIMATED NUMBER OF CHICKS HATCHED BY HATCHERIES, BY GEOGRAPHIC DIVISIONS

Month	New England			Mid Atlantic			South Atlantic			E. N. Central		
	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
Jan.	5,148	5,480	3,933	4,301	4,811	2,769	3,978	5,573	4,981	2,908	6,033	5,392
Feb.	5,854	6,354	5,778	8,928	10,885	7,699	6,262	8,483	6,017	14,395	15,063	9,374
Mar.	8,037	9,500	8,242	17,576	17,604	16,536	11,870	13,592	12,584	42,052	48,404	42,379
Apr.	8,191	8,545	9,322	18,444	18,768	18,567	13,337	14,808	16,165	65,108	70,292	71,004
May	5,331	5,745	5,118	11,883	14,853	12,882	8,885	10,323	10,912	60,733	64,958	61,734
June	2,357	2,249	2,058	3,166	4,423	4,919	4,723	5,131	5,964	22,375	26,447	25,701
July	1,958	2,709	3,342	1,249	1,224	1,274	2,527	2,611	3,681	7,121	7,217	8,884
Aug.	2,140	2,855	2,532	790	1,119	1,359	1,946	2,841	3,067	1,530	1,952	1,995
Sept.	2,091	2,781	2,149	974	1,245	1,289	2,046	2,897	2,771	1,241	1,802	1,430
Oct.	2,769	2,463	2,834	1,016	1,339	827	2,272	3,430	4,084	1,248	1,070	934
Nov.	2,494	2,267	2,509	981	952	936	2,926	3,187	3,914	1,817	1,817	1,470
Dec.	2,872	2,340	2,807	1,288	1,078	1,548	2,961	2,888	3,865	2,258	2,263	2,656
Total	49,302	53,588	50,624	70,601	78,321	70,705	63,733	75,764	78,005	222,786	247,338	232,953

Thousands

	W. N. Central			South Central			Mountain			Pacific		
	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
Jan.	4,025	5,672	4,310	4,908	7,781	5,109	4,85	610	314	3,912	4,316	3,206
Feb.	11,974	15,674	8,133	13,716	16,214	7,811	1,541	2,156	1,383	7,503	9,628	6,666
Mar.	43,022	49,573	45,663	20,898	25,255	22,892	3,448	4,121	3,930	12,278	14,388	11,874
Apr.	72,547	84,232	79,216	21,609	24,038	24,857	3,815	4,788	4,630	9,846	13,473	9,765
May	67,682	79,736	69,145	8,992	10,796	10,314	3,066	3,899	2,813	4,499	7,096	4,219
June	21,913	25,416	32,321	1,526	2,157	2,363	1,376	1,736	1,505	2,692	2,435	2,205
July	1,736	1,987	2,045	806	847	464	141	172	100	1,534	1,730	1,628
Aug.	967	1,468	987	786	1,068	761	123	149	96	1,585	1,855	1,675
Sept.	1,326	1,694	1,476	1,473	1,628	1,959	89	107	100	2,226	2,030	1,724
Oct.	1,343	1,428	919	1,848	1,975	2,119	70	77	87	1,911	1,983	1,551
Nov.	1,238	1,114	786	1,495	1,818	1,950	54	58	28	2,003	1,819	1,613
Dec.	1,296	919	582	2,018	2,251	2,411	54	58	26	1,870	1,861	1,904
Total	229,069	268,919	245,583	80,075	95,828	83,010	14,262	17,931	15,012	51,859	62,614	48,030

gbp

only 1.3 percent of the average annual production of those years. The volume of hatchings appear to remain rather constant from August to December, after which it begins to increase rapidly and reaches a sharp peak in the following April. Approximately one-fourth of the annual production of hatchery chicks is produced in April. Over two-thirds of the annual production is produced during the three months of March, April, and May, and approximately one-tenth during the months of June and July.

The production of hatchery chicks during the "off-season" (August through December) is small compared with the production during the other months of the year, being a little over 9 percent of the total yearly production. When it is considered, however, that the greater part of this "off-season" hatch consists of chicks for broilers, and that the production of broilers was not important a few years ago, its significance becomes apparent. It represents a sale of between 75 and 100 million chicks during a period in which a few years ago relatively few chicks were hatched or sold.

Geographical Variation of Production Noted.

Considerable seasonal variation exists between the production of the principal geographic regions in relation to the production of the entire country. Except for the Mountain States, all sections at some specific period during the year produce a significant proportion of the total annual production. For example, the 3-year (1938-40) average May production in the New England States and South Atlantic States was about 10 percent of the total May production for all States, but the December production of these two regions averaged 40 percent of the total December production of the United States. This proportional variation is not the result of a corresponding change in volume hatchings, as the peak in these areas is reached in April as elsewhere, but is due to a heavy fall-chick demand from commercial broiler producers along the Atlantic Seaboard. Because of this demand, the seasonal decline in hatchings in the New England and South Atlantic States from April to December is considerably less pronounced than in any other section. On a quantitative as well as proportional basis, the December production of hatchery chicks in the New England and South Atlantic States is the largest for any areas.

During the months of February-June, inclusive, the output of chicks by commercial hatcheries in the West North Central and East North Central States far exceeds the output of chicks by hatcheries in other sections of the country. During this 5-month period in 1940, hatcheries in the middle west produced 54 percent of the total 1940 production. But with most of the hatcheries in the middle west closed down after June, other sections of the country become important producers of baby chicks.

The production of hatchery chicks during the last half of the year is primarily for the commercial producers of broilers, but there are some

TABLE 4. CHICKS HATCHED BY COMMERCIAL HATCHERIES BY GEOGRAPHICAL DIVISIONS

Month	Monthly Percentage of Total U. S. Production											
	New England			Mid Atlantic			South Atlantic			E. N. Central		
	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
	Percent											
Jan.	17.8	14.4	13.1	12.5	9.5	9.2	13.3	14.9	16.6	12.1	15.9	18.0
Feb.	7.8	6.7	10.9	10.5	11.1	14.6	9.4	10.1	11.4	22.2	19.6	17.7
Mar.	4.4	4.6	5.0	10.6	9.2	10.1	7.8	7.5	7.7	25.9	26.3	25.8
Apr.	3.2	3.2	4.0	8.8	8.0	8.0	6.1	6.2	6.9	30.4	28.1	30.4
May	3.1	2.6	2.9	7.5	7.9	7.3	5.0	5.2	6.2	34.0	32.0	34.8
June	5.0	3.6	2.7	5.7	6.8	6.4	7.0	7.3	7.7	37.4	36.4	33.4
July	12.0	15.4	15.6	9.4	8.5	5.9	14.0	13.5	17.2	38.7	36.4	41.5
Aug.	17.1	17.2	20.3	8.3	9.9	10.9	16.2	18.2	24.6	27.6	25.4	16.0
Sept.	16.1	16.9	16.7	11.1	10.8	9.9	17.6	17.8	21.5	17.6	18.8	11.1
Oct.	20.6	17.8	21.2	9.8	11.4	6.2	16.4	20.2	30.6	17.4	17.5	7.0
Nov.	21.1	20.7	19.0	10.1	10.5	7.1	19.1	20.3	29.6	16.2	16.1	11.1
Dec.	20.7	23.0	17.8	11.0	10.4	9.8	18.5	17.5	24.4	16.3	16.2	16.8

Month	Monthly Percentage of Total U. S. Production											
	W. N. Central			South Central			Mountain			Pacific		
	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
	Percent											
Jan.	14.3	14.2	14.4	14.5	18.9	17.0	1.8	1.5	1.0	13.7	10.7	10.7
Feb.	17.9	19.6	15.4	19.1	18.6	14.8	2.3	2.7	2.6	10.8	11.6	12.6
Mar.	28.3	28.2	27.8	12.6	13.5	13.9	2.2	2.3	2.4	8.2	8.4	7.3
Apr.	35.2	36.6	33.9	9.9	10.1	10.6	1.8	2.1	2.0	4.6	5.7	4.2
May	40.3	40.7	39.0	5.3	6.2	5.8	1.8	2.0	1.6	2.0	3.4	2.4
June	34.8	34.1	41.9	3.5	3.8	3.1	2.2	2.4	2.0	4.4	3.4	2.8
July	9.5	10.0	9.5	6.2	5.9	2.2	.8	.9	.5	9.4	9.3	7.6
Aug.	6.7	8.6	7.9	8.9	8.0	6.1	1.0	.9	.8	14.2	11.8	13.4
Sept.	9.1	9.9	11.4	10.9	12.2	15.2	.6	.6	.8	17.0	13.0	13.4
Oct.	8.1	8.0	6.9	15.6	13.2	15.9	.4	.4	.6	11.7	11.5	11.6
Nov.	7.1	6.8	6.0	14.6	12.3	14.8	.3	.4	.2	11.5	10.9	12.2
Dec.	6.7	5.2	3.6	15.4	15.4	15.3	.3	.3	.2	11.1	12.0	12.1

exceptions. The principal exception is in the Pacific Coast States, where a part of the "off-season" hatch is used for layer replacement in commercial egg-producing flocks. This is also true, but to a lesser degree, in New England and other commercial egg-producing areas.

Not all States in each section of the country are important producers of baby chicks in the "off-season", nor by any means are all of the chicks hatched in a State during that time raised in that State. The inter-State shipments of chicks are important throughout the year, but they are particularly so during the late summer, fall, and early winter months. Hatcheries producing chicks for "off-season" broiler production must have a large volume in order to keep down overhead and operating costs, and this requires a wider marketing area than during the flush season when there is a local demand for chicks for general flock replacement.

The principal States in which hatchery chicks are produced in volume during the latter part of the year are Connecticut, Massachusetts, and New Hampshire in the New England States; Pennsylvania and New Jersey in the Middle Atlantic States; Maryland, Delaware, Virginia, North Carolina, and Florida in the South Atlantic States; Indiana, Ohio, and Illinois in the East North Central States; Missouri and Kansas in the West North Central States; Texas, Oklahoma, and Arkansas in the South Central States; Arizona and Colorado in the Mountain States; and California in the Pacific Coast States.

The output of chicks during the last six months of the year in the New England, South Atlantic, and Pacific Coast States, constitutes a much larger proportion of the annual production in these sections than does the output of hatchery chicks during the same period in other sections of the country. Many hatcheries in these sections operate during every month of the year with very little variation in monthly output. In 1940 the New England hatcheries produced 21.8 percent of their 1940 production during that time, the South Atlantic hatcheries 30.0 percent, and the Pacific Coast hatcheries 21.0 percent. By contrast, the output of hatcheries in the East North Central States during the last six months of 1940, while almost as large as the output of chicks in the South Atlantic States, was only 7.5 percent of the total production for the East North Central States.

The Broiler Industry Develops.

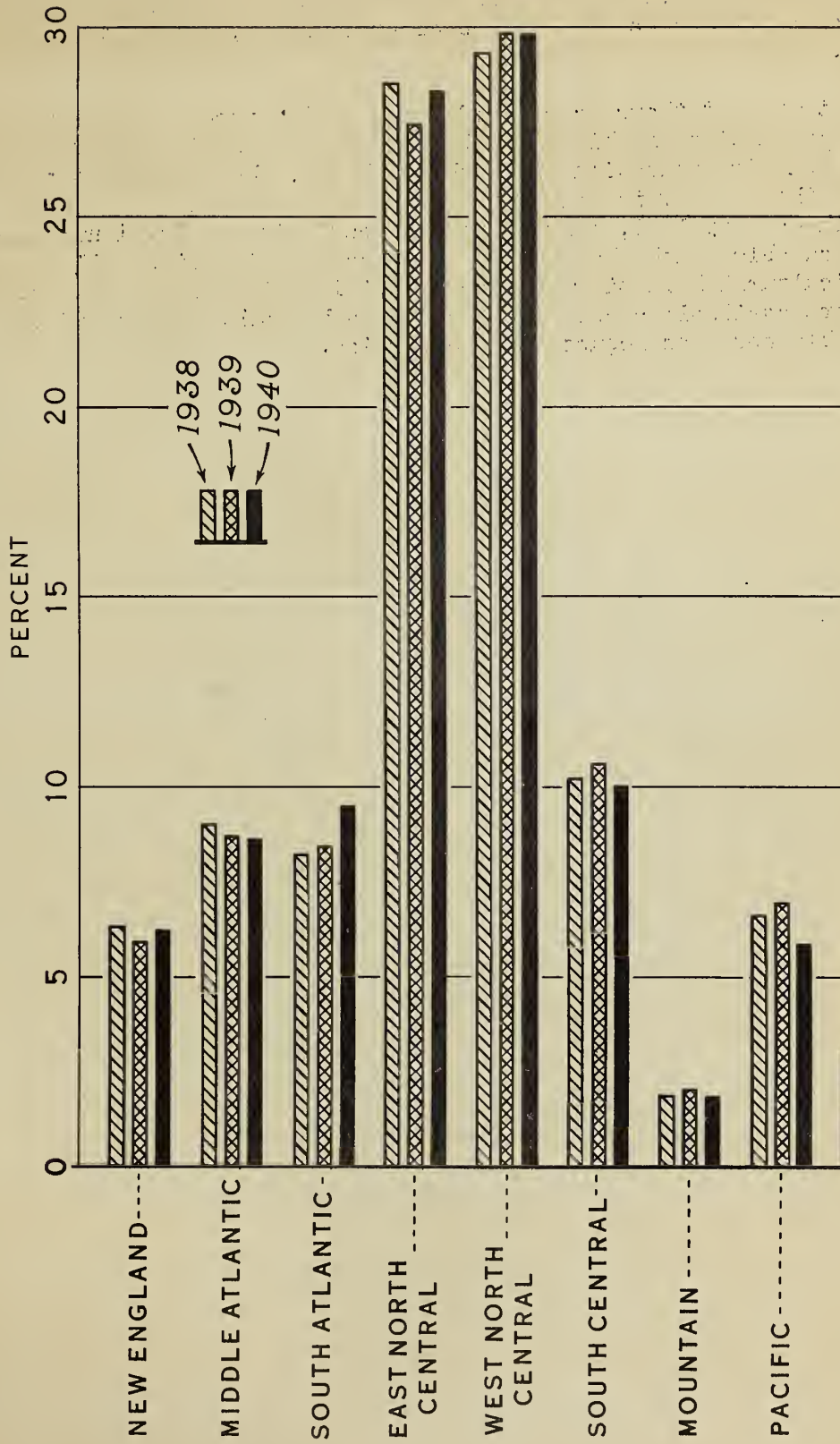
The growth of the commercial broiler industry in Eastern Seaboard States has had a profound effect upon the production of "western" box-packed poultry, which prior to 1938 constituted the principal supply on all eastern markets. Prior to 1938, the western box-packed broilers and fryers came to these markets in large quantities from August to October, and many of them were stored. During the past two or three years, the year-round eastern production of fresh killed barrel-packed broilers and fryers has been so large that the storing of "western" box-packed

TABLE 5. CHICKS HATCHED BY COMMERCIAL HATCHERIES BY GEOGRAPHICAL DIVISIONS

Monthly Percentage of Total Sectional Production												
New England			Mid Atlantic			South Atlantic			E. N. Central			
Month :	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
	Percent											
Jan.	10.4	10.2	7.7	6.1	6.1	3.9	6.2	7.4	6.4	1.3	2.4	2.3
Feb.	11.9	11.9	11.4	13.9	10.9	10.9	9.8	11.2	7.7	6.5	6.1	4.0
March	16.5	17.7	16.3	22.5	23.4	23.4	18.7	17.9	16.2	18.9	19.6	18.2
April	16.7	15.9	18.4	24.0	26.2	26.2	20.9	19.6	20.7	29.2	28.5	30.5
May	10.8	10.8	10.1	19.0	18.4	18.4	13.9	13.7	13.9	27.2	26.3	26.5
June	4.8	4.4	4.2	4.5	7.0	7.0	7.4	6.8	7.6	10.0	10.7	11.0
July	4.0	5.1	6.6	1.8	1.8	1.8	4.0	3.4	4.7	3.2	2.9	3.8
Aug.	4.3	5.3	5.0	1.1	1.4	1.9	3.1	3.7	3.9	.7	.8	.9
Sept.	4.2	5.2	4.2	1.6	1.6	1.8	3.2	3.8	3.7	.6	.7	.6
Oct.	5.6	4.6	5.6	1.7	1.7	1.2	3.6	4.5	5.2	.6	.4	.4
Nov.	5.0	4.2	5.0	1.2	1.2	1.3	4.6	4.2	5.0	.8	.7	.6
Dec.	5.8	4.7	5.5	1.4	1.4	2.2	4.6	3.8	5.0	1.0	.9	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Monthly Percentage of Total Sectional Production												
W. N. Central			South Central			Mountain			Pacific			
Month :	1938	1939	1940	1938	1939	1940	1938	1939	1940	1938	1939	1940
	Percent											
Jan.	1.8	2.2	1.8	6.1	8.1	6.2	3.4	3.4	2.1	7.4	6.9	6.7
Feb.	5.2	5.8	3.3	17.1	16.9	9.4	10.8	12.0	9.2	14.5	15.4	13.9
March	18.8	18.4	18.6	26.2	26.4	27.6	24.2	23.0	26.2	23.7	23.0	24.7
April	31.7	31.3	32.2	27.0	25.1	29.8	26.7	26.7	30.8	19.0	21.5	20.3
May	29.4	29.8	28.2	11.2	11.3	12.4	21.5	21.7	18.7	8.7	11.3	8.8
June	9.6	9.5	13.2	1.9	2.2	2.8	9.6	9.8	10.0	5.1	3.8	4.6
July	.8	.7	.8	1.3	.9	.6	1.0	1.0	.7	3.0	2.8	3.4
Aug.	.4	.5	.4	1.0	1.1	.9	.9	.8	.6	3.1	3.0	3.4
Sept.	.6	.6	.6	1.8	1.7	2.4	.6	.6	.7	4.3	3.2	3.6
Oct.	.6	.5	.4	2.3	2.1	2.6	.5	.4	.6	3.7	3.2	3.2
Nov.	.5	.4	.3	1.9	1.9	2.4	.4	.3	.2	3.9	2.9	3.4
Dec.	.6	.3	.2	2.5	2.3	2.9	.4	.3	.2	3.6	3.0	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

CHICKS HATCHED BY COMMERCIAL HATCHERIES, BY GEOGRAPHIC DIVISIONS PERCENTAGE OF TOTAL U.S. PRODUCTION



birds for the eastern market is now a more speculative undertaking. This change has, in turn, had an effect upon the hatchery industry of the Middle West by lowering the spring peak which previously included a large number of chicks to be grown for broilers, fryers, and roasters for eastern markets.

At present there is no evidence that the recent tendency toward "off-season" production of chicks has been retarded. It is felt that by estimating the monthly production of hatchery chicks, the Department of Agriculture will aid the poultry industry in keeping abreast of these changes. Beginning with January 1941, current monthly estimates of total number of eggs set and salable chicks hatched by commercial hatcheries will be made by the Agricultural Marketing Service and will be itemized in a special hatchery report available around the 21st of each month. Copies of this report can be obtained upon request to the Service.

